

An Alleged Diminution in the Size of Men's Heads

ALLOW me to draw the attention of your readers to a statement which is certainly strange, if true. An opinion is prevalent in the hat trade that the size of men's heads has undergone a decrease within the last thirty or forty years. The following statement has been given to me by a hatter whose name has attained a pre-eminence of a duration of more than one generation. "Five-and-thirty years ago," he says, "when I was a young man, we used to purchase hats for retail trade in the following ratio:—

Sizes 21—21½—22—22½—23—23½ inches.

Relative number ... 0—1—2—4—3—1

At the present time," he adds, "I am selling hats in this ratio:—

Sizes 21—21½—22—22½—23—23½ inches.

Relative number ... 3—4—3—1—1—0"

A manufacturer writes: "I should say that heads generally are two sizes less than at the time you refer to. A head of more than twenty-four inches' circumference is now quite a rarity, whilst we make thousands of hats for heads with a circumference of about twenty-one inches." I have received similar statements from other members of the trade, both wholesale and retail, and therefore feel that no further apology is required for bringing them under your notice. Accepting the statement *quantum valet*, I have endeavoured to ascertain whether I could find any explanation or confirmation thereof. I have not succeeded, and therefore venture to ask information or opinions through your columns. The statement comes to me not only from men of experience in the trade, but from men of intelligence and observation exercised beyond the limits of the shop or the factory. It is, I am informed, extensively believed among hatters; it may, nevertheless, be merely a general impression. The diminution, it is said, is observed mostly among grooms and men of that class in the social scale. If this be really the case the change should be noticeable also among soldiers. The diminution is possibly more apparent than real, and may be traceable to alteration in the style of hair-cutting, or of wearing the hat. It has been suggested to me that men of the present generation have from birth smaller heads, dependent upon an alteration in the dimensions of the female pelvis, in consequence of modern fashion in dress. Of this opinion, however, I obtain no confirmation from eminent obstetricians of whom I have made inquiries. The statement then, as it stands, is wanting in explanation, and calls for further investigation. I may here quote the reply sent me by Prof. Flower to my question as to his opinion on the statement made by the hatters "that men's heads were smaller than they were twenty years ago":—

"Before drawing any important conclusion from such a statement it would be necessary to know much about the authority upon which it is made. Who, for instance, are the hatters that make it? Do all hatters concur in the same statement? Is it a mere general impression, or is it founded upon actual arithmetical data? Does it refer to any particular class of men, and does it refer to the same class of men? If it should be true, may it not arise from some change of fashion (if only founded upon the size of the hat, and not of the head) other even than the one you suggest, of hair being worn shorter—such as hats being worn more on the top of the head than formerly (in old-fashioned prints one sees the hat well down over the ears, which is certainly not the case now), or perhaps hats of the kind specified being now worn by a different (perhaps lower) class of the community, or by younger people? All these questions must be considered, and perhaps other sources of error eliminated which may not occur at first, before the statement can be accepted. If the evidence of the statement appears to bear investigation it would be well worth while following it up, as, if true, it would be one of the most remarkable facts with which I am acquainted, that in the space of twenty years a material diminution in the average size of the heads of the same population has taken place—a fact so contrary to all theory and to all experience."

For my own part I confess to some degree of scepticism as to the FACT, and should be glad of an explanation of this, probably only apparent, diminution in the size of men's heads.

Little Park, Enfield, October 26

W. B. KESTEVEN

The Evolution of the Palæozoic Vegetation

I AM pleased to have elicited the opinion of so distinguished an authority as Prof. Williamson upon Saporta and Marion's

work, and his criticisms, even where antagonistic, will also, I am sure, be received by them with pleasure. Prof. Williamson holds views regarding the interpretation of some of the plant remains which are at variance with those held by most French geologists; but were the correctness of all his views conceded, I do not think Saporta and Marion's theory of the evolution of plants would thereby fall to the ground. A vast array of fact, which is not controverted, has been brought forward in a very able manner, and a connected and well-considered theory as to the nature of the modifications that have led through Cryptogams to Phanerogams is for the first time presented in a concise and lucid manner; and I think few will agree with the professor in deprecating such work because knowledge of the older floras is still incomplete.

J. S. GARDNER

The Teaching of Practical Biology

IN the interesting introductory address of Prof. T. Jeffery Parker at Otago there is an omission which I am sure my friend would be the very first to wish to have rectified. In speaking of that remarkable development of the teaching of practical work in biological laboratories which will no doubt have a very considerable influence on the pursuit of this branch of science, Mr. Parker makes reference to the considerable services which have been rendered by Professors Huxley and Ray Lankester; but he forgot to say that one who, unfortunately, is no longer among us, provided for systematic teaching in practical work some time before Prof. Huxley was enabled to bring his wishes to fulfilment. The characteristics of this line of study were made known to the general zoological world in 1870, when Prof. Rolleston published his "Forms of Animal Life, being Outlines of Zoological Classification based upon Anatomical Investigation and illustrated by Descriptions of Specimens and of Figures." Prof. Rolleston's system was well enough shown in his preface to that work, where there occurs the following sentence, which I beg leave to quote as germane to this question:—"The distinctive character of the book consists in its attempting so to combine the concrete facts of zootomy with the outlines of systematic classification as to enable the student to put them for himself into their natural relations of foundation and superstructure."

October 29

F. JEFFREY BELL

The Igneous Rocks of Iceland

LAST year a friend and I rode round the north and west sides of Iceland, and from my observations then I cannot doubt that the conclusions to which Dr. J. Geikie has arrived concerning the south-west of the island apply equally to the more northerly parts. The glacier-scourings on the older lava were especially marked in a district unexplored except by a few Icelanders, and known as the Storisande or Big Sand. This desert lies to the north of Ball's Jokul and Långe Jokul, and between Arnevatn and the River Blanda. As we crossed the undulating surface of the old lava, pale and ruddy in colour, the contrast was very striking where the black basalt seemed to rise from the plain in jagged cliffs up to the ice-field which caps these ranges. Where the sand was blown off this pale lava there were the lines of glaciation clearly engraved. The trend of the desert as a whole was towards the north, and the lines of glaciation ran north and south. In the Husavik district we saw, besides these two lavas, the lava of the present century, including that of 1875.

A. J. HUBBARD

1, Ladbroke Terrace, Notting Hill, W., October 31

Replacing Flint Flakes

WITH reference to the replacing of flint flakes on Palæolithic implements it may be of interest to your correspondent, Mr. W. G. Smith (NATURE, vol. xxiv. p. 582), to learn that I have succeeded in building up a core out of Neolithic flakes. When searching the sandhills at Dundrum, Co. Down, last August, with my friend Mr. J. S. Hyland, I noticed a number of flakes of a similar colour lying on the slightly raised shingly beach on which the sandhills stand, at a point where the sand had apparently been recently blown away. Seeing from an imperfection in the stone that several fragments had formed part of the same flint, I collected all the pieces I could find, some of which were at a yard or two's distance from the rest. Without much trouble I was able the same evening to put them together, and have so fixed twenty-two flakes into position, forming about three-fourths

of the original pebble. The operator had first broken the pebble into two halves, and then chipped two-thirds of one half away in flakes, of which I found thirteen; the remainder of that half he threw down as useless. Of the other half I have nine flakes, and one is missing; the unbroken remainder is also gone. Perhaps the workman threw it away to a distance in disgust, as he does not seem to have got a single satisfactory flake out of the whole flint. The appearance of the half which I have almost complete is extremely like the illustration of the core made up out of a modern flint-knapper's flakes in Evans' "Stone Implement," except that the crowns of the flakes are triangular instead of quadrangular. There are the same small interstices between the crowns of the flakes, showing that the blow splinters off on each side of the bulb of percussion a small fragment, as well as the flake itself. This explains why the average concavity on the core is slightly less than the average convexity of the flake at the top of the bulb of percussion.

F. ARCHER

Crosby, Liverpool

Climate of Atacama

SOME practical evidence as to climate has come forward at the shareholders' meetings of the northern Railways of Chile, the Coquimbo, Tongoy, and Carrizal and Cerro Blanco. In each of these districts torrential rains have occurred, which are all reported as unexampled. Long residents state that rain was formerly little known, and such was my observation in connection with the district. One reason why the weather is deserving of attention is that no change has taken place in the water-surface or vegetation. A similar change to rain in the Suez and Cairo district is attributed to the Suez Canal, but it is a matter worthy of consideration whether we are not really entering on a cycle of change. So far as Atacama is concerned, if at any former period there were rains, the conditions of habitation must have been different from those which have been so long considered to apply to the rainless district.

HYDE CLARKE

PHYLLOXERA CONGRESS.—Dr. E. R. F. wishes to know where he can obtain a full report of the recent Phylloxera Congress at Bordeaux.

SCIENTIFIC INSTRUMENTS (J. S. MARSTON).—We cannot undertake to commend any particular instrument maker; you should get the lists of the leading makers, whose addresses you will find in our advertising columns.

HOLLOWAY COLLEGE.—So far as we understand this is not a charitable institution: Miss S. should write to the authorities at the College, Staines.

EFFECTS OF COLOURED GLASS (E. M.).—It is owing to the law you refer to.

THE AUTUMN SKY

I.

MANY and varied must ever be the regrets that attend the departure of summer days and summer pleasures; and their remembrance casts a lingering sadness even over the bright and beautiful hours that often alleviate the approach of sterner and gloomier seasons. Such impressions however are not shared alike by all. Few perhaps altogether escape their influence; but in some classes they are softened or even obliterated by the development of interests and pleasures of a very different description. Such is especially the case with the astronomical observer. The shortening of the twilight hours is to him as the withdrawing of a veil that obscured the minuter, yet not least interesting, features of the glorious scenes that he loves to explore; and he views with fresh pleasure the deepening tone of the background of unfathomable space, as the atmospheric illumination fades steadily away. We cannot indeed in our latitudes rival the transparent purity of the south, that gives such a magnificent depth to the aspect of the firmament, and throws out in such radiant brilliancy the host of heaven; yet even our autumnal skies are so great an advance upon

the misty softness of the summer's night that the observer cannot but rejoice in their return.

These remarks are very obvious, not to say somewhat late in their application, when the sun has already advanced so far upon his downward way: yet they may not be entirely inappropriate when we are about to draw attention to some of the present characteristics of the sky. Much now in every direction invites the inquiring gaze, and an early hour challenges the opening of the observatory, or the arrangement of the telescope. Eye-pieces should be cleaned, adjustments rectified. Instruments of all kinds and sizes may be called into profitable and pleasant requisition—let the possessors only make the best of what they have. If we do not see more than we anticipate, though that may sometimes happen among the uncertainties of the English climate, yet we shall surely see enough to amaze us at the greatness of the Creator.

From its pre-eminent brightness, the planet Jupiter will naturally be the first object of attention. Belts we shall expect to find traversing his great broad disk, for they are very seldom absent; but there also we shall encounter a more unusual object, the ruddy patch, which has been sometimes described as vermilion, possibly from "personal equation," but which to most eyes exhibits a cinnamon or brick-red hue. There it has been, with scarcely any appreciable change, for the last three years—a degree of permanence equalled, and even surpassed, by some dark spots in ancient days, but singularly contrasted with the general mutability of the markings of the disk. What is that spot? and where is it situated with regard to the real surface of the planet? Is it mere superficial colouring? but if so, of what material? Or is it an opening in the great mass of clouds—or what we call such—that is thought to envelope this colossal globe? But if so, how strange that its outline should have remained so steadily permanent. And in that case, as it is difficult to suppose it at the same level with those dark grey bands which have been ascribed to a similar absence of vapour, shall we place it above or below them? We might infer the former, if it is the case, as has been said, that it is more easily traced up to the limb than the dark belts; but the observation is delicate, and the effacing of the grey bands in that situation is not matter of universal consent. We might possibly conceive, on other grounds, admitting that the dark belts do indicate a deep clearing of vapour, that ruddy tints are caused by something at a higher level, because these are occasionally suffused over the whole equatorial zone and its markings, so as sometimes even to affect the general colour of the planet to the naked eye. The interposition of trees has prevented the writer hitherto from observation this year, but the accompanying sketch, taken 1879, November 12, with my 9½-inch

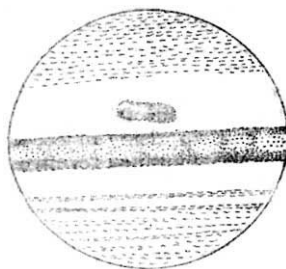


FIG. 1.

"With" mirror, may perhaps be of some interest in comparison with the observations of the present season.

The image, it will be noted, is telescopic, *i.e.* inverted.

¹ Traces of it may be detected in the Earl of Rosse's observations in 1873; but it seems to have been unnoticed in the interval.